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by ALBERT H. MILLER, M.D.

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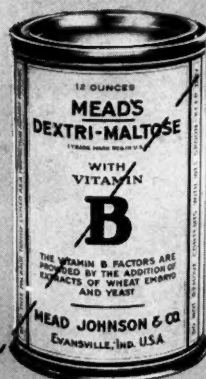
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## ORIGINAL ARTICLES

### A REVIEW OF SMALLPOX VACCINATION

By JOSEPH SMITH, M.D.

OF THE

HEALTH DEPARTMENT OF THE CITY OF PROVIDENCE

The Rhode Island law requires every person attending any school, public or private, to present a certificate of successful vaccination. The parent is therefore motivated by the thoughts of a certificate. Such is the fallacy of our American mind that we all deem a scrap of paper embellished with a seal a certificate, whereas, in vaccination against smallpox at least, the best type of certificate is the immune reaction of the subject.

Labor Day is just ahead, and so, with the approaching of school days, we had best take stock of our vaccination knowledge.

We all know that vaccination was first publicly propounded by Dr. Jenner in 1796 in England and that it was first done in America in 1800. We all know that proper vaccination is the best preventative against smallpox, but do we all know what constitutes proper vaccination?

Do we know the proper method of keeping the virus? Do we know the best method of vaccination? Do we realize the care necessary in reading the results of vaccination or how to take care of the vaccination to get proper results?

A review of our knowledge of these matters is of value. This paper is offered with this thought in mind.

First: What is our vaccine virus? What does it contain? The virus we buy today is a glycerine solution containing the virus of cow pox, the debris of calf epidermal cells and calf serum. We must always remember that in vaccination we are dealing with protein materials which may interfere at times with our reading of later reactions.

#### *Storage of Vaccine Virus*

How should this virus be kept, stored and handled? We all know that heating destroys the potency of vaccine virus, but few realize how injurious is the heat to which it is subjected in the

common handling. For storage, vaccine virus should be kept cold—0° C. is not too cold. It should be kept on ice, or better, if one has a Frigidaire or other automatic refrigerator, in the ice-making compartment. If you have to carry it from the drug store to your office, carry it in an outside pocket and not in your inside vest pocket where the heat will tend to destroy the virus. The careless handling of a capillary tube of vaccine virus, by rolling it in the hand or playing with it, tends to impair the potency of the virus. And then the physician wonders why he did not get a take. He forgot that he kept the capillary tube in his hand about ten minutes while telling a story. How long did the clerk warm the tube before him? These things should be kept in mind. As soon as you buy your virus, get it on ice. And keep it there until you are ready to vaccinate. Remember that besides being useless to vaccinate someone with an impotent virus, such practice tends to discredit the practice of medicine.

#### *Method of Vaccination*

That method of vaccination which gives the greatest percentage of takes in the non-immune group and which produces the least trauma and the smallest percentage of secondary infection is the method of choice. It is the introduction of the vaccine virus into the body, and not any secondary infection or incidental trauma, that causes the immunity to develop. The multiple pressure method of Kinyoun, as modified by Leake, is by far the best method of vaccination at our disposal, as it fulfills our conditions. It is simple yet efficient.

The site on the arm is washed with soap and water and cleansed with acetone. This removes the film of fat which covers the skin. The acetone evaporates quickly. A drop of the vaccine virus is placed on the skin of the arm at the insertion of the deltoid and the flat of a round needle is pressed at a point through the drop into the skin rapidly about twenty times. The needle is held tangential and parallel to the skin, and the vaccinating area is kept as small as possible, 1 to 1.5 square millimeters. Usually no blood is drawn. It must always be remembered that the needle is held parallel and not obliquely to the skin. The excess

lymph is then wiped off, and the subject is told to return later for observation. *Shields are positively prohibited.*

#### *Site of Vaccination*

Vaccination can be done on any part of the epidermal surface of the body, but should be done only on the arm at the insertion of the deltoid. The reasons for this choice are: (1) the character of the skin, softness, here is best suited for the vaccination; (2) it is readily available for observation and if necessary for treatment; (3) there is less chance for infection than if done on the thigh or leg; (4) if necessary, the arm can be rested at the height of the vaccinal reaction. Vaccinations on the leg are abominable. The nearness to the anus and the urinary meatus predisposes to secondary infection. The circulation in the leg is more sluggish than that in the arm and tends to prolong the vaccinal reaction in its subsiding or healing stage. Vaccinations on the leg also cause more discomfort to the patient. Since the leg does more work than the arm, there is greater risk of trauma to the vesicle. When one mentions "scars" we should member that "scars," the bugaboo of arm vaccinations, are caused by injury to the vaccination and not by its location.

#### *After-Care*

The vaccinal operation should not end the physician's care for his patient. Proper after-care tends to prevent the unsightly scars which have done so much to discredit vaccination. Care must be taken that the area about the vaccination be kept clean and dry. This will prevent any secondary infection. Of course, it is realized that skin disinfection is not perfect, but washing the arm frequently with alcohol can do much towards getting rid of many saprophytic and pathogenic organisms near the site of the vaccinal lesion. It is these bacteria which cause trouble in vaccination by gaining an entrance during trauma to the vesicle. It is therefore well to recommend to the parent to wash the site of vaccination every three to four hours with alcohol, beginning on the fourth or fifth day after vaccination. In some cases morning and night is sufficient. It is also remarkable how comfortable an alcohol wash makes the arm. If the vaccination feels itchy, or if it has been scratched or bruised in any way, a painting with tincture of iodine, followed by a washing with alcohol, gives instant relief. The angry redness disappears. The patient feels better. The routine painting of the arm on the

fifth day after vaccination with tincture of iodine followed in a few minutes by an alcohol wash, or, painting with an alcoholic solution of picric acid by the physician as a precautionary method, is recommended. This may be repeated daily, but it is not always necessary. Washing the arm with alcohol morning and evening relieves the itching in many cases and keeps the arm clean. For infants, boric acid talcum powder may be dusted over the vaccination after this washing. The arm must be guarded against injury such as blows or scratches. Shields should never be worn. At the height of the reaction, the arm should be put to rest in a sling. The importance of not scratching should be stressed. The patient's bowels should be kept open.

#### *Best Time to Vaccinate*

Since infants two months of age are not so apt to scratch or injure the vaccination, all babies should be vaccinated at about that age. Don't wait until the child is ready to go to school. Do it early as there is then less chance for trauma or infection. Since the immunity lasts a few years, it is best to revaccinate at five years of age. On revaccination, an immune reaction is usually obtained, which is the best type of certificate.

#### *Reading the Reaction*

Everyone knows how a vaccination take acts and looks, erythema, papule, vesicle, pustule, umbilication, and subsequent drying and scabbing of the area. The area of redness surrounding the central lesion is easily recognized as part of the process, but we forget that the areola should be not more than 2-3 millimeters wide. A wider area indicates some trauma such as scratching or even a blow. A wider area means more care is needed, that the arm should be washed with alcohol oftener. For primary vaccinations that is all we need to know. Our troubles, however, begin with the reading of reactions of immunity. The greater the immunity of the individual the more abortive the reaction and the greater our difficulty in its reading. Is the reaction one of complete immunity or is it an accelerated reaction?

Many physicians have never seen an immune or immediate reaction. This reaction comes up within the first forty-eight hours and it is gone by the end of the week. It is just a red papule which is rather itchy. It looks very much like a mosquito-bite. This reaction indicates practically complete immunity, for the time being at least, to smallpox.



The accelerated reaction indicates partial immunity. It is at its height in the third and fifth day following vaccination. These reactions of immunity develop only in those who have been previously vaccinated or who have had smallpox (or in the rare case of transmitted immunity). In the accelerated reaction the lesion itself may reach the pustulation stage, though usually vesiculation is the height of the process.

#### *Protein Reaction*

The greatest trouble, of course, is in recognizing the so-called protein reactions in cases of revaccination and the differentiation between them and the reaction of immunity, or the so-called immediate reaction.

As was stated earlier the vaccine virus we use is a glycerinated protein solution. If one injects *into* the skin a protein mixture, he will get, if the subject has been sensitized, a wheal formed at the site of inoculation. This reaction is what we get in testing for sensitivity to the various pollens—or in the Von Pirquet test. We also get this reaction in cases of revaccination. This reaction cannot be differentiated from that of immunity, except that in the same individual the immune reaction is of greater severity. Frequently the practising physician on seeing the papule believes that he has an immune reaction, whereas in truth the reaction was a protein reaction only, because the virus was spoiled through heat and had lost its virulence, but still retained its protein character. This, of course, is apt to be confusing in those cases of revaccination—such as in epidemics of smallpox, or in hospital work, or in other group vaccinations in adult life.

This protein reaction does not indicate immunity, though its severity is equal in many cases to that of the immediate reaction of immunity. Indeed in certain instances the protein reaction in one individual is greater than the immune reaction in another. But in the same individual the immune reaction is of greater severity, being as it really is a mixed reaction—(1) susceptibility (vaccine protein), and (2) immunity (virus).

The only way to read the immune reaction correctly is to have a vaccination with a heated vaccine in close proximity as a control. Of course, if you are sure of your vaccine—just off the ice—you do not need a control, but in cases such as quoted above—secondary group vaccinations—a control is necessary.

The question often arises when should the patient return for reading of the reaction. The public clinics are usually conducted on a weekly schedule. As a result people have made a habit of returning at the end of the week for reading and care of the vaccination. In private practice this should be discounted and the patient should be asked to return on the sixth and tenth days following vaccination. In this way the patient is seen just as the vaccination is showing itself and also when it reaches its height. On the sixth day the doctor renews the advice previously given and notes whether or not the reaction will take place. On the tenth day, with the vaccination at its height, a visit by the physician tends to raise the patient's morale.

In cases of revaccination the patient should first be seen twenty-four to forty-eight hours after vaccination. If this is done and if a control has been used, it is possible to read an immune reaction and give a certificate. If there is no immune reaction evident the patient is asked to return on the sixth and tenth days as in cases of primary vaccinations.

#### *Summary*

The approach of school brings up the problems of vaccination; vaccine, site, method, reading of reaction and after-care. Each problem can be readily handled by close observance of the following rules.

1. Keep the vaccine virus cold (0° C.).
2. Vaccinate early in life (2 months).
3. Vaccinate at the insertion of the deltoid only.
4. Use the Leake modification of the Kinyoun method (multiple pressure).
5. Remember the after-care (alcohol washing).
6. On revaccination use a control.

#### AMBLYOPIA DUE TO EMOTIONAL DISPLACEMENT\*

By HUGH E. KIENE, M.D.

CRANSTON, R. I.

The chief aim in the practice of medicine is to do as much as possible to assist the patient. The physician's duty is not confined to his own limited specialty, but rather includes his advising the pa-

\*Read before the joint meeting of the Rhode Island Societies for Neurology and Psychiatry and for Eye, Ear, Nose and Throat, February 9, 1931.

tient to see a colleague in any branch of medicine which he feels is necessary in order to return the patient more nearly to normal health. It is not enough to make a diagnosis and then treat one symptom without giving the patient an idea as to the underlying pathology. An oculist would certainly be condemned if he treated a syphilitic iritis locally with no concern for the more important generalized blood infection. In a similar way are cases of hysterical blindness treated, with no regard as to what has caused the condition to develop. The etiology remains unknown. Most often there is a rationalization by the physician in the form of an excuse such as, "I haven't the time necessary for such a study." But is this to be accepted as a reason for overlooking some condition which, if it be allowed to continue, prevents the patient from making his best social adjustment? To speak of the opposite attitude, Freud himself admits curing a person of a stomach complaint by psycho-analysis, only to have the diagnosis of carcinoma returned at the autopsy. The psychiatrist is as much at fault as the oculist or the otolaryngologist, but that is neither here nor there. No matter who is responsible, the practice is against the fundamental aims of medicine.

This leads me to quote what was said by J. R. Lord in his presidential address to the Royal Medico-Psychological Association in 1926: "Now medical science as a whole is concerned with the restoration and preservation of health of the individual, and by health we mean the possession of a healthy mind and a healthy body. General medicine used to be divided into internal medicine, surgery, and obstetrics, but the dividing line between any of these—never a clear one—can no longer be said to exist. Some of the special branches of medicine which have arisen during the past century or so occupy anomalous positions, since the means they employ are not limited to those of any one of the divisions mentioned."

During the examination of cases of hysteria, the history of many operations is common; when the details of the symptoms preceding the operations are inquired into, it is found that they do not fit in with any very well defined clinical entity. Sometimes the attitude of the physician is, "Well, I know she hasn't much wrong, but if I don't operate her someone else will." Another complaint of the hysteric is, "I have always been sickly." This is enough to require a careful examination into the

history in order to elicit the reasons for these complaints.

My idea in giving this speech was at first to fall back on neurological eye symptoms and signs, but these are talked about every day among both neurologists and ophthalmologists. I realized that there were a few conditions less commonly discussed in everyday medical parlance, so I sought this safer refuge, and tonight will discuss briefly these conditions which are seen more or less frequently in psychiatric practice.

In hysteria, when amblyopia is the most prominent symptom, the eye is the organ of the body on which there is an attachment of the emotion or libido. This results partially, at least, as an attempt on the part of the person to escape from an undesirable situation. The purposive motives and gains to be secured arise to meet divergent needs and desires. The patient is unaware of the gratification he is receiving by this method. This is illustrated more clearly in the second case, which I will present later.

I have made no effort to discuss the finer intrinsic mechanisms of the eye itself, probably for self-protective reasons, but will confine myself to the term eye, meaning the eye as a whole, or as a unit consisting of its connections, including muscles, nerves, ectodermal layers and mechanisms of its movements.

Psychiatry, like all other specialties in medicine, has a more or less fixed terminology which is necessary in order to explain psychic changes. These words denote concepts which are familiar to the psychiatrist but unfamiliar to the oculist, as in a reversed order are certain terms of the oculist foreign to the psychiatrist.

The following statements may seem dogmatic, though the concepts presented are the subject for much discussion. The space and time does not allow a consideration of the various opinions, so those best recognized are given. They are chiefly Freudian. To begin with, the functions of the mind or psyche are studied and treated by the psychiatrist. The mind is an integral part of the individual, dependent to a great extent on the anatomical structures of the body and their physiological functions. Particularly are the functions of the psyche due to the cerebral cortex. The opposite is not true, as all the functions of the cerebral cortex cannot be said to belong to the complex called psychic.

A comparison may assist to make this clearer. There is considerable similarity between the reflex

and psychic processes. In the first place, they are both caused by external sensations or stimuli, and their purpose is to react to these in a manner beneficial to the individual. Other than this resemblance there is profound difference. The reflex reacts only to the one particular stimulus, all other stimuli exerting no influence, while in the psychic processes the reaction is not only dependent on the one stimulus, but also on many others, causing a great fluctuation in the response which occurs. These other stimuli are in the form of "experiences" and memories of events which have previously occurred. In other words, the reflex always reacts in the same manner to the same stimulus, while the psyche has infinite possibilities of reaction which are highly complex and plastic; that is, the reactions of the individual differ with the same stimulus according to the particular circumstances, while the reactions of the reflexes are simple and very stable. As an example, the pupillary reflex to light may be compared with the pupillary response due to an extreme emotion—fright, fear, desire. The oculist can trace the pathway of the light reflex and so account for the first mentioned reaction which is constant and similar when the pathway is not altered by pathology. Not so with the dilated pupil due to an extreme emotion; it has a more complicated background before it is satisfactorily explained. Here the instincts and memory of previous experiences which are recalled by the stimulus must be considered. These latter, including all the associations which they cause to be brought forth, form what is called a psychic process.

At birth the child is endowed with instincts; the most important are those of race preservation, self-preservation and herd. During life there is a constant attempt to satisfy these instincts. This drive or emotional energy is spoken of by Freud as libido. The libido is constantly shifting in the child, its first attachment being on the individual himself. It is at this time that the child is making discoveries about his own body; he is an instinctive, self-loving animal, not yet having learned that such a display of primitive emotions is wrong. This period, the narcissistic, is named after the narcissus, which is a flower that grows on the banks of streams where it seems to be admiring its own beauty mirrored in the clear water. This period only lasts a very short time, and is followed by the homosexual stage, when interests change, the child now forming attachments to those of the same

sex. The libido shifts from the self-loving baby most often to one of the parents, from whom the child constructs his ego-ideal. The object of attachment is idolized and considered the acme of perfection. The ego is more specifically the conscious part of the personality or awareness, as opposed to the unconscious or id, where the conflict takes place between the desire or wish to satisfy the instincts, combated by the restrictions of social conventions and teaching.

While I am on this subject, the third part of the personality should be spoken of. This is the super-ego, which represents the critical faculty and acts as a judge, deciding on what material can be brought to consciousness and that which must be suppressed in the unconscious. In the psychopathic personality there is a defect in the super-ego, so the instincts are allowed too much freedom and cannot be adapted to society. Thus they require permanent supervision, most often in a corrective institution.

To return to the libido; it is held fixed until the child learns that there are faults in his ideal. This results in a shifting of the libido on to some new object; perhaps the school teacher will be the next recipient, or any other person may be selected, such as some national hero. In the last four years, Lindbergh, after his epoch-making flight to France, became a part of the ego-ideal in many young minds.

The next period, the heterosexual, starts at puberty and continues through adolescence. During this time the libido should be detaching itself from the parent and seeking out members of the opposite sex, until it finally fixes itself to the mate, at which time, under ideal conditions, there is complete emancipation from the parents and the establishment of a new home, which becomes an independent unit.

This brief description takes up what occurs in the theoretical normal person. In many others the libido remains permanently on the ego or self, or it may continue and become fixed on the parent, as is often seen in the case of the hysteric. These premature fixations are caused by experiences with which the individual meets during his growth. The most influential experiences are those associated with the parent, because the parent is the child's cosmos during the most important formative period of his life, usually considered as being from birth to the sixth year, when the permanent character has been laid down.

Now the hysterical makeup, from the standpoint of personality defects, is manifested by a poor synthesis of the personality, which makes it possible for certain groups of ideas to drop from an effective association (hence dissociation) with the main portions of the personality. This group of ideas occupies a region called the unconscious, and there existing more or less independently, produces its effects, irrespective of attempted corrections from the rest of the personality.

Dissociation of the personality, according to Janet, is based on a doctrine of psychological tension—a property he describes as analogous in its reactions to atmospheric pressure—the variations being produced by constitutional or emotional causes. When this tension is high, mental processes are integrated with comparative ease, and efficient adaptation to reality is attained. When it is low, the required integration is impossible, and dissociation of some kind occurs. When situations of extreme difficulty arise, there are but two alternatives—fight or flight. If, however, the obstacle cannot be met by a person—say one hysterically constituted—a compromise situation will develop. He can take on some bodily incapacity as a legitimate excuse for abandoning the struggle, thus squaring his own conscience and providing against the censure of public opinion. Such a reaction represents a partial break in mental control, in other words a shutting off of recognition by the psyche of some organic function such as vision, and absolving the person from further struggle. His hysterical conduct may be infantile and ineffectual, but it represents that particular person's most efficient way of meeting a situation. These manifestations are always symbolic, harking back to the specific psychic conflict. Freud believes the psychoneuroses develop as a result of a conflict between forces emanating from sex instincts and personality forces, the libido and the ego; "the failure of adjustment arises when the ego loses its capacity to deal in some way with the libido." Relative to dissociation of the personality, Freud stated that this group of ideas is out of harmony with the rest of the personality, that they represent ideas which were in conflict with the idea forming the consciousness of the person, and are therefore repressed, with conversion as the result. Repression then is, with Freud, the fundamental factor or the basis of hysterical manifestations, an active and not a passive mental factor which tends to put out of the conscious mind these certain unacceptable groups of ideas. He says, "We

come to the conclusion from working with hysterical patients and with other neurotics, that they have not fully succeeded in repressing the idea to which the incompatible wish is attached. They have driven it out of consciousness and out of memory, and apparently saved themselves a great amount of psychic pain, but in the unconscious the suppressed wish still exists, only waiting for its chance to become active, and finally succeeds in sending into the consciousness, instead of the repressed idea, a disguised and unrecognizable surrogate-creation, to which the same painful sensations associate themselves that the patient thought he was rid of through repression. This surrogate of the suppressed idea—the symptom—is secure against further attacks from the defenses of the ego, and instead of a short conflict there originates permanent suffering."

So far I have discussed the psyche or mind, the function of this by the psychic process, the libido arising from the instincts and how it influences mental development by its shifting from one object to another, the divisions of the personality, ego, id and super-ego, or the conscious and unconscious levels governed by the censure, and the conflict occurring in the unconscious as a result of repression, leading to aberrant means of expression called conversion.

But why does the subject select the eye on which to place the heavily laden emotion arising from the conflict? This question is answered in the discussion of the psychological mechanism in the cases which follow. At the time of the traumatic experience there are other events occurring in the environment, which events the subject associates with the traumatic experience. The conflict thus arising, as said before, continues submerged in the unconscious, but the expression of this often assumes the form of some association which occurred at the same time. In a complete psychological study, these associations are made clear. The blindness in the hysteric does not happen by chance, but takes place as a result of certain definite circumstances.

A case which demonstrates functional blindness will bring out the intricate psychological mechanisms leading to its development. This patient is the oldest child in a family of eight. He is now 40 years old and has an enviable educational record, possessing a Fine Arts degree, a Master's degree, and is now completing a course which will give him the degree of Doctor of Philosophy. He has writ-



ten several good books on psychology, especially on the interpretive aspects. We call the blindness in this patient functional rather than hysterical, as the other symptoms and his reactions indicate an anxiety state with ruminative ideas and intolerable apprehension which has led him to consider suicide seriously on several occasions.

Very early in life he developed a marked feeling of responsibility and an admiration for his parents. He was unusually shy, having a feeling that he was abused, and identified himself with his father, who had also been discriminated against during his early life. The father was the black sheep of a family of Kentucky blue bloods, and had thrown off the paternal domination and hied himself to the West, where he became a farmer. Psychologically the father did not feel that he was living up to the family standards, but instead of making an attempt to find out the reasons for this and correct them, he sought refuge by blaming the family, saying that his father hadn't given him his just desserts as compared with what the other children had received. In this way the patient's behavior can be partially explained; his failures have always been said to have been due to the influence of other people.

During the early years of his life the boy lived a great part of the time with his grandparents, who were suffering from senile ocular changes. He took care of his grandmother when she was dying, bathing her and acting the part of a nurse.

The boy's mother was a slight little woman, quiet and unobtrusive, going about her household duties with little concern for anything except her children, whose part she took at all times. While the boy was still quiet young, the mother complained of spots before her eyes, and it was found when she was examined by a physician that this was due to a kidney condition, although it was cleared up by proper treatment and she is now living and in good health at the age of sixty.

During adolescence, the patient developed an extreme degree of horror regarding masturbation, feeling that he was permanently injured mentally by this habit. This made him even more sensitive in the group, as he heard at this time that such a habit could be detected by any casual observer.

Another factor of importance which cannot be overlooked is that the patient possesses a thin, poorly developed, unattractive physique, which barred him from the more active athletic games and made him still more introspective.

Compensation was made for his physical inferiority by intellectual achievement, preaching from the pulpit at the age of sixteen, at his own request. He then continued his studies in various colleges. On account of limited finances, there were many

interruptions in his education. He worked at many different jobs during these intervals, preaching and newspaper writing being the most lucrative. Through all this he continued to feel that he should assist his family, sending them money and helping his brothers and sisters to get a start in life.

At the age of twenty-five he fell in love with a girl many years his senior. She had definite ideas concerning the future, to which the patient at first submitted, but when marriage seemed to be imminent he changed, and instead of listening and accepting as he previously did, he became the aggressor, bringing forth his own ideas, which he felt were more applicable. There resulted a clash between the two, neither one being willing to give in to the other. The result was inevitable, the engagement was broken and the marriage forestalled. With the break in this relationship there developed a complete amaurosis, which continued for one month unameliorated. This condition was so severe that it was necessary to have his lessons read to him by his room mate. There was a complete recovery from this visual defect after this period, and he again resumed normal activities.

The period between the ages of twenty-six and forty is of no importance as far as the eye symptoms are concerned. When he was forty, another woman, this time sixteen years his junior, attracted his attention. She was an attractive young school teacher who naturally was having many problems in a vocational way, and was glad to receive help from such a brilliant person. They got along very well as long as the man could be of assistance, but being a woman of some intelligence, the young lady liked to express her own opinions on the subjects under discussion. Arguments ensued for a short time, and there was a gradual widening of the abyss between the two. As this is taking place at the present time, there has been a diminution in the vision of both eyes, accompanied by smarting and pain. The patient is now under treatment, as mentioned in the beginning, for an anxiety state, with a prominent symptom which he complains of as an inability to concentrate.

Before unfolding the psychological background, I must answer a question which undoubtedly is uppermost in your minds—that of a possible physical disturbance. Before the patient was seen by a psychiatrist he had been very carefully examined by an ophthalmologist and an internist, neither finding pathology to explain the symptoms. The psychiatric examination and treatment were carried out chiefly by free association; questions were occasionally asked, so that the method used cannot be said to be psycho-analysis. The patient was allowed to express his thoughts as they came to his

mind; the physician took an entirely passive role, being only the recipient of what was said, and maintaining the patient's confidence (which condition is called rapport or transference).

The patient had early identified himself with his father, as previously stated, feeling that he was abused, and assumed the responsibilities which resulted from being the oldest of eight children. He did not feel as well endowed physically as his brothers or schoolmates—in other words, he felt inferior, so there was a conditioned response explaining some of his later reactions. Due to inadequate instruction, and on account of his retiring ways, he early developed the habit of figuring things out for himself. With this came an unusual amount of sex curiosity which led to auto-erotism, with the feeling of guilt which followed as a result of sexual thoughts about his grandmother when he was caring for her. As a boy he heard his mother and both grandparents complain of their eyes. There was also an association between the sexual wishes for his grandmother and her blindness. (This was brought out spontaneously by free association.) At this time there was a desire to emancipate from home, opposed, however, by emotional dependence on his parents, which resulted in a conflict or ambivalence. Adjustment was made for his feelings of inferiority and guilt, capitalizing on his oratorical ability by an educational and religious drive. This mechanism is one means of sublimating energy, i. e., making it serve a useful purpose.

There was the continuation of the emotional bondage between patient and parents, with the change of the patient from the child or submissive role to that of the dominant parent role. This was demonstrated by the way in which he became the advisor in religious, intellectual and economic ways to his parents, sending them the *Literary Digest*, lists of religious literature, and assisting them financially by sending them sums of money. The conflict which was mentioned was not solved to the patient's satisfaction, so he became attached to a woman much older than himself. She assumed the dominant parental role, but with his attempt to establish his own identity as pointed out above, there was a rift in the affair, ending in a solution which was not satisfactory, as the emotional bondage between himself and his parents continued. Being unable to accept this, he resorted to the most familiar family pattern, blindness, associated with his mother, grandmother and grandfather.

The tension from this underlying conflict was unabated. He acted as a guide to his parents and still maintained a deep attachment to them. By various activities he was able to sublimate to some extent, at least, this conflict, for the intervening fifteen years between the ages of twenty-five and forty. Then as the conflict again became unbearable he chose a much younger girl as the object to relieve him of this burden. This time the patient was in the dominant parent role, and the girl was

chosen as the one to whom he could shift the emotional bondage. As long as she accepted his advice and requested his help, this solution was satisfactory, but when there was a change in her attitude from the submissive to the dominant role, there was again a breach, ending in the dissolution of the affair, with the return of the eye difficulty.

It is interesting to note that during the period of blindness the emotional tension is relieved, only to return when the vision is restored. This shows the attachment of the libido or emotional energy on an organ, and is called conversion. Conversion accounts for one of the symptoms by which the hysteric can be differentiated from the patients suffering from organic pathology. He is not so apprehensive or worried about his blindness, but rather is really relieved.

In the case just reported, only a very small part of the analysis is mentioned, only that which applies to the subject in question. The remainder is very interesting, but would require more time and would be irrelevant to the topic under discussion.

Another example, a not unattractive white woman thirty-four years of age, was referred to me only recently for psychiatric study. On account of the shortness of time she has been under treatment, my material is limited to a few factors which are outstanding. On the morning of May 29, 1930, this patient woke up at four o'clock, and on opening her eyes, everything in the room seemed hazy; she could not make out the furniture clearly. This surprised her, and she wondered what had happened. On investigation she found the sight completely gone in the left eye and only a little vision remaining in the right. The night before, on retiring, she could see normally. This sudden change did not prevent her from going to work as usual, but she soon learned that she could not see well enough to pick up the defects in the cloth, which was her job as an inspector in a cotton mill, so after two hours she excused herself and went home. The next day she called on the family physician, who told her that the optic nerves were affected and referred her to a neurologist, where she was assured that the condition was only temporary and would improve with treatment. This treatment continued for about six months, without any noticeable change in her vision. It was then recommended that she consult an oculist, who found that she had 4/200 vision and a marked constriction of the visual fields. With his treatment, which consisted in the subcutaneous injection of strychnia into the subtemporal region, and reassurance, she regained her sight in three days, recovery occurring on December 18, 1930, five months and twenty days after the amblyopia had first appeared, and vision has been normal since that time.

On inquiry, it is found that she has always been sickly, attendance at school was often interrupted, and she has been operated twice, at the ages of 22 and 27, appendicitis and adhesions being the re-

spective diagnoses. Menses have been irregular and the quantity variable.

Her mother died two months after her birth, from complications, so the patient was cared for by a maiden aunt and another maiden lady, the latter playing the part of a mother. The patient was kept in ignorance concerning her mother's death until she was eleven.

The father was an unusual person. His profession as a barber was often interfered with by his religious beliefs. He belonged to a cult known as the Christ Adolphus (?) and was somewhat of a reformer, trying to push his views on his customers, who did not seem to accept them, as his business soon dwindled to nothing. After the patient's birth, she saw little of him; he would pay her infrequent visits, the interval between visits being much longer after he remarried when the patient was five. One of the creeds of his cult was that a license was unnecessary for marriage. He was able to convert the woman he married to his view, but not his daughter, who was a Catholic. She unconsciously looked on the two as being immoral on this account, and her respect for her father was replaced by an aversion. When she was ten, the father wanted her to live with them, but she would not leave her aunt, so he wrote letters threatening to kidnap her. This aroused considerable fear in her mind; she was afraid every time she saw a man when by herself. A stroke is given as the cause of the father's death when the patient was twenty-six. The stepmother, who was very much disliked, accused her of being to blame for his death because she wouldn't do as he requested.

The aunt with whom she lived from infancy is described as a jolly, capable woman who assumed all the responsibilities. A pelvic tumor made her a chronic invalid for five years before her death. This sickness made it necessary for the patient to provide for her, and their small savings was quickly used up by physicians' fees and hospital bills. The aunt failed to recover, following an operation for the removal of the tumor, and died two years ago, leaving the patient with Miss Jones, the woman who passed as her mother for eleven years. The patient's life has been more or less strenuous since the aunt's death, with which event the patient had to assume responsibility for the first time. Miss Jones was not a happy woman, and was dependent on the meager income which the patient made.

The patient finished a grammar school education with no difficulty was followed by work in a woolen mill as inspector. This position was held for twelve years, when the mill shut down five years ago. Work was then obtained in a cotton mill in the same capacity. This required more time and effort, and the work was done grudgingly with very little satisfaction. There was often the desire to quit, but another position was not available. In December, 1929, trouble began; the cloth coming from the loom had more imperfections, requiring closer

scrutiny, and it was necessary to keep her mind right on the work all the time. She said, "My eyes would get tired looking at the work all the time." The pattern of the cloth was not changed, making the inspection more monotonous. The futility which was felt is shown in the following statement which she made, "I didn't like the noise of the machinery, the dust and sweat. At night I felt like I didn't want to see anybody."

On account of her bashful, retiring manner the patient had few fast friends. At the age of eighteen she kept company for a year and a half with a man ten years her senior. She describes him as being "set in his ways, quiet, and didn't want anyone else to look at me. He just wanted to go walking, and never took me any place." Any thought of marriage or even improper familiarity is denied. They are said to have just drifted apart, although the patient claims it was her wish. Nothing else other than an occasional date is mentioned until the age of twenty-nine, when she became acquainted with a man who had a little money. Their meeting was arranged by his sister, who was a friend of the patient's. He is said to have wanted to marry the young woman, but she made light of the whole affair, teasing and playing pranks on him. Their separation is blamed on his sister, who is said to have told him stories of the patient's going out with other men, which were not true, but she would not tell him differently. After he had quit coming to visit, she felt more lonesome, and was upset for over a month but says she soon got over it. The reason she gives for the separation is, "I didn't want to leave my aunt; she was sick and needed me." This affair ended three years ago, except that he occasionally takes her riding on Sunday afternoons.

After a few interviews, when she had become more co-operative, some additional light was shed on the condition. This consisted of an early feeling she had that something was amiss, things were not the same for her as for the other girls, her father was away so much. At eleven, when she was confirmed, her name had to be changed. Previously she had been going by the name of the woman whom she thought to be her mother; now she took her father's name. All this was disturbing to her young mind. Back of the superficial reasons she had previously given for not thinking seriously of marriage, I found a most outstanding fear of childbirth having resulted from the knowledge that this was the cause of her mother's death.

Here is a case in which the psychological background is still somewhat hazy, but one at least gains some idea about what has caused the patient to seek a means of escape from the present situation. The other avenue, through marriage, is blocked by her fear of childbirth, so not finding other means she chose the method most suitable which would excuse her from work without being socially ostracized, and so her conflict was temporarily solved.

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## EDITORIALS

### BIRTH CONTROL

Various impulses looking to the supposed improvement or welfare of mankind occasionally seize the mind and find expression in certain of our activities; at times it is merely a fad, at times it is in the nature of a presumed factor in general economic betterment that fires our enthusiasm; and at times it possesses elements of essential basic worth.

It is in the latter category that we may benignly classify the movement that has fascinated the

imagination and appears to have stirred a zephyr in the atmosphere of the country, called Birth Control.

The value of this movement must be based upon the foundation of whether the woman is physically qualified to bear children, and by this we mean the absence of malformations, tuberculosis, certain diseases of the heart, transmittable diseases and continued devitalizing strain of child-bearing. Beyond this physical aspect the physician plays no part.

As citizens we may be interested in the civic, social and economic phases, as to whether the child will be reared under conditions that tend to



good citizenship, that by reason of environment and at least common advantages he will be socially, physically and mentally qualified (and inclined) to meet successfully the requirements that eventually will be thrust upon him.

There are numerous angles of approach in the consideration of this subject, amongst which is the attitude of physicians who appreciate that when a thing is much talked of, erroneous ideas may develop. Charlatanism and lay activities are not to be overlooked and the physicians of Rhode Island are lending themselves reservedly to this movement, not to foster it or to promulgate it, but largely that it may be held ethically in leash.

At best it is a most delicate matter and we ask ourselves is it altogether a boon. Conscious of a supposed safety, does a somewhat widespread knowledge or faith tend to greater liberties with a more or less fixed idea that the doctor or his devices will relieve the likelihood of pregnancy. What authority is qualified to dictate or even suggest to another woman regulations as to her family? How far may we go without invading the sanctity of human privilege?

Any woman facing matrimony, faces also the probability of motherhood and if she willingly ignores or repudiates this greatest, most majestic and glorified achievement of woman, that transcends all others, why should she marry?

The answer rests with her.

Who profits by the propaganda of Birth Control? Is it the intelligentsia? Look and read.

Who, that the intelligentsia mentally classify as "others" are apt to profit by it?

With a realization that has endured since the dawn of history that the constantly increasing family meant increasing responsibility, privations, and often want, have they ever profited? And do they really care to be taught?

In short, can the only people whom Birth Control might benefit, be successfully reached?

They, beyond question, are receptive to advice, but there are moments when, with the rare exception of in the extremely well disciplined mind, even good advice is forgotten; when dealing with animal instincts and emotions the question assumes monumental obstacles.

The adherents and workers in the matter of Birth Control are, without serious question, acti-

vated by the best of motives, but the attainment of the objective is still concealed in a dense nebula of doubtful conjecture.

### THE DRINKER RESPIRATOR

As Providence and the adjoining communities constitute together one of the larger centers of human concentration in the United States, it is to be expected that methods and equipment for the study and care of the more unusual medical and surgical conditions should be available in this region. Special clinics and specially trained clinicians as well as unusual and highly specialized apparatus ought to be found somewhere in the district so that those patients who present unusual conditions requiring the aid of such agencies can receive what may in some instances be life saving treatment. At the present time there are many needs of this sort still unfulfilled as, for example, the need of a well trained "team" for bronchoscopic work. A real advance, however, can now be recorded in the gift to the Rhode Island Hospital of a Drinker Respirator. It is an apparatus which, though it may not in the ordinary course of events be often called into play, is absolutely indispensable when the need does arise. It is quite true that conditions in which there occurs failure of the normal automatic mechanism of respiration are exceedingly rare. Nevertheless, those clinicians, for example, and they are by no means few, who have watched patients die with paralysis of diaphragm and intercostal muscles, as occurs in poliomyelitis of the bulbar type, can well appreciate the value of artificial respiration completely and efficiently maintained as it can be by the Drinker apparatus. It is appropriate to add that the present reports of poliomyelitis make it to be greatly feared that the apparatus may be greatly needed in the immediate future. In addition to its use in paralysis of the respiratory muscles associated with poliomyelitis the apparatus is also of great value in care of poisoning by carbon monoxide, drowning and poisoning by various drugs, such as morphine, heroin, barbitol, alcohol and others. It was originally devised by Professor Philip Drinker and Mr. Louis A. Shaw of the Harvard School of Public Health at the request of the New York Consolidated Gas Company. Already this company has records of a larger number of cases of poisoning by illuminating gas in which the respirator has been effective in

bringing about recovery. The people of Rhode Island are to be congratulated that this life saving device is to be available for anyone who may need it and are justly grateful to Mrs. Fenner H. Peckham, who has generously presented it as a fitting memorial to her husband, the late Dr. Peckham.

### EDUCATION

Many people of middle age, or later, think and speak disparagingly of the mental and moral status of the younger generation, forgetting that the faults of youth are entirely due to the faulty instruction and example of the elders.\*

The physician, philosophically contemplating a new born child, must be moved to sadness as he considers what history will write on this new, clean page. From the accumulated wisdom of the ages, from the wonderful products of science and invention, and from illustrious examples of the noble and great, what chapters will be chosen? Little of all this because the child will learn less from precept than from example. In the first few years of life he will learn from observation of what passes by or is thrust before him and will form a character and settle a disposition, largely determined by what he has seen and heard.

In place of pride in a healthy body and a clean mind he may choose physical and mental depravity. In place of reverence for God in all His works, he may find pleasure in killing and may consider himself most prosperous when destroying at the greatest rate natural resources which he cannot replace and which his children may seek for in vain. He may be taught selfishness, superstition, dishonesty, brutality, worship of money and power, and the sexual depravity of medieval ages.

An increasing number of diseases formerly thought to be inherited are now known to be due, not to constitutional fault, but to environment. Most of the faults of the younger generation are not inherent but due to the teaching of their elders.

The emperor, Kublai Khan, ruling the world's greatest empire, boasted that a young maiden could bear a pot of gold from end to end of his vast domain and that no one would molest her. Such is the power of education.

## *Doctor!*

- - Encourage your  
post-paralysis patients  
to donate blood for  
a great cause - -

## *Saving Life*